

IN THE CLAIMS

We claim:

1. A method comprising:

providing a substrate, said substrate comprising a first region and a second region;

forming a multilayer mirror over said substrate;

forming a phase-shifter layer over said multilayer mirror;

forming a capping layer over said phase-shifter layer;

removing said capping layer and said phase-shifter layer in said second region;

illuminating said first region and said second region with EUV light; and

reflecting said EUV light off said first region and said second region.

2. The method of claim 1 wherein said phase-shifter layer comprises molybdenum.

3. The method of claim 2 wherein said capping layer comprises silicon nitride.

4. The method of claim 2 wherein said capping layer comprises carbon.

5. The method of claim 2 wherein said molybdenum comprises a thickness of about 43 nm.

6. The method of claim 5 wherein transmission in said first region is about 60 % of transmission in said second region.

7. The method of claim 5 wherein phase in said first region is shifted about 180 degrees from phase in said second region.

8. A method comprising:

providing a substrate, said substrate comprising a first region and a second region;

forming a multilayer mirror over said substrate;

forming a phase-shifter layer over said multilayer mirror;

removing said phase-shifter layer in said second region;

forming an intensity balancer layer over said phase-shifter layer in said first region and over said multilayer mirror in said second region;

removing said intensity balancer layer over said phase-shifter layer in said first region;

forming a capping layer over said phase-shifter layer in said first region and over said intensity balancer layer in said second region;

illuminating said first region and said second region with EUV light; and

reflecting said EUV light off said first region and said second region.

9. The method of claim 8 wherein said phase-shifter layer comprises molybdenum.

10. The method of claim 9 wherein said intensity balancer layer comprises silicon nitride.

11. The method of claim 10 wherein said phase-shifter layer comprises about the same thickness as said intensity balancer layer.

12. The method of claim 11 wherein said phase-shifter layer comprises a thickness of about 55 nm.
13. The method of claim 12 wherein transmission in said first region is about the same as transmission in said second region.
14. A structure comprising:
 - a substrate, said substrate comprising a first region and a second region;
 - a multilayer mirror disposed over said first region and said second region;
 - a phase-shifter layer disposed over said multilayer mirror in first region
 - an intensity balancer layer disposed over said multilayer mirror in said second region; and
 - a capping layer disposed over said phase-shifter layer in said first region and over said intensity balancer layer in said second region.
15. The structure of claim 14 wherein said phase-shifter layer comprises molybdenum.
16. The structure of claim 15 wherein said intensity balancer layer comprises silicon nitride.
17. The structure of claim 16 wherein said phase-shifter layer comprises about the same thickness as said intensity balancer layer.
18. The structure of claim 17 wherein said phase-shifter layer comprises a thickness of about 55 nm.

19. The structure of claim 18 wherein transmission in said first region is about the same as transmission in said second region.
20. The structure of claim 19 wherein phase in said first region is shifted about 180 degrees from phase in said second region.